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Leshchenko Yu.

CONOCYBE FAYOD AND *PHOLIOTINA* FAYOD FROM THE KHARKIV REGION, UKRAINE: A CRITICAL REVISION

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Both *Conocybe* Fayod and *Pholiotina* Fayod are large groups of fungi belonging to the family Bolbitiaceae Singer, characterized by dark brown or rusty-coloured spores, medium-sized (often small-sized) and delicate fruit bodies. All the species are presumed to be decomposers with widespread distribution in different types of plant communities. 51 species of *Conocybe* and *Pholiotina* are known in Ukraine (Prydiuk, 2015), although only 6 species were found in the Kharkiv region (Prylutskyi, 2018).

The reason lies in insufficient taxonomic investigations, high macromorphological similarity and variability between the basidiomata of species, which leads to the appearance of subspecies and make the precise identification of taxa almost impossible. This leads to the accumulation of a large amount of collections material without identification. Thus, we assumed that these researches are still incomplete and require further investigations, especially in the North-East of Ukraine.

Species of this family are known from all continents except Antarctica, and distributed throughout climatic zones, ranging from tropical to arctic. They can be found in a wide variety of plant communities: in meadows, pastures, in forests, steppes, semi-deserts, on sand dunes, swamps and so on, from lowlands to alpine meadows, most often on neutral or alkaline soils. They are widespread in natural habitats; however, they are quite common in anthropogenically modified places, in particular, in gardens and parks (Prydiuk, 2015).

The aim of this work is to summarize the current knowledge about species diversity of the close genera *Conocybe* Fayod and *Pholiotina* Fayod and to provide the detailed descriptions of the species collected from Eastern Ukraine.

A critical revision of these taxa based on collections made in 2013–2016 from the Mycological Herbarium of V. N. Karazin Kharkiv National University – CWU(MYC). All specimens were collected in the Natural National Nature Park "Homilsha Forests": mostly in the maple-lime oak forest, fewer in meadows, followed by soil roads and swamps. The results of the revision of herbarium collections clearly indicate that

regional *Conocybe* and *Pholiotina* mycota supposed to be much larger than previously reported.

Presently, 14 species and varieties of *Conocybe* are known from the studied area amongst which 10 species are mentioned in the region for the first time: *Conocybe brachypodii* (Velen.) Hauskn. et Svrček, *Conocybe echinata* (Velen.) Singer, *Conocybe juniana* var. *juniana* (Velen.) Hauskn. et Svrček, *Conocybe juniana* var. *subsejuncta* Hauskn., *Conocybe macrospora* (G.F. Atk.) Hauskn., *Conocybe mesospora* Kühner et Watling, *Conocybe pulchella* (Velen.) Hauskn. et Svrček, *Conocybe rickeniana* P.D. Orton, *Conocybe semiglobata* Kühner ex Singer, *Conocybe subpallida* Enderle. Genus Pholiotina, however, was represented by the 4 species, 3 of them were found on the territory of the Kharkiv forest-steppe for the first time: *Pholiotina arrhenii* (Fr.) Singer, *Pholiotina dasypus* (Romagn.) P.-A. Moreau, *Pholiotina mairei* Kühner ex Watling.

We analyzed our findings in terms of their occurrence frequencies in the natural habitats. The metadata and photos of fresh fruit bodies and diagnostic microstructure are available through PlutoF database.